

DERWENT-ACC-NO: 2002-729483

DERWENT-WEEK: 200279

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TITLE: Semiconductor device

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PRIORITY-DATA: 2000KR-0072134 (November 30, 2000)

PATENT-FAMILY:

| PUB-NO          | PAGES       | PUB-DATE     | MAIN-IPC |
|-----------------|-------------|--------------|----------|
| LANGUAGE        |             |              |          |
| KR 2002042312 A |             | June 5, 2002 |          |
| 001             | H01L 021/76 |              | N/A      |

APPLICATION-DATA:

| PUB-NO         | APPL-DESCRIPTOR   | APPL-NO |
|----------------|-------------------|---------|
| APPL-DATE      |                   |         |
| KR2002042312A  | N/A               |         |
| 2000KR-0072134 | November 30, 2000 |         |

INT-CL (IPC): H01L021/76

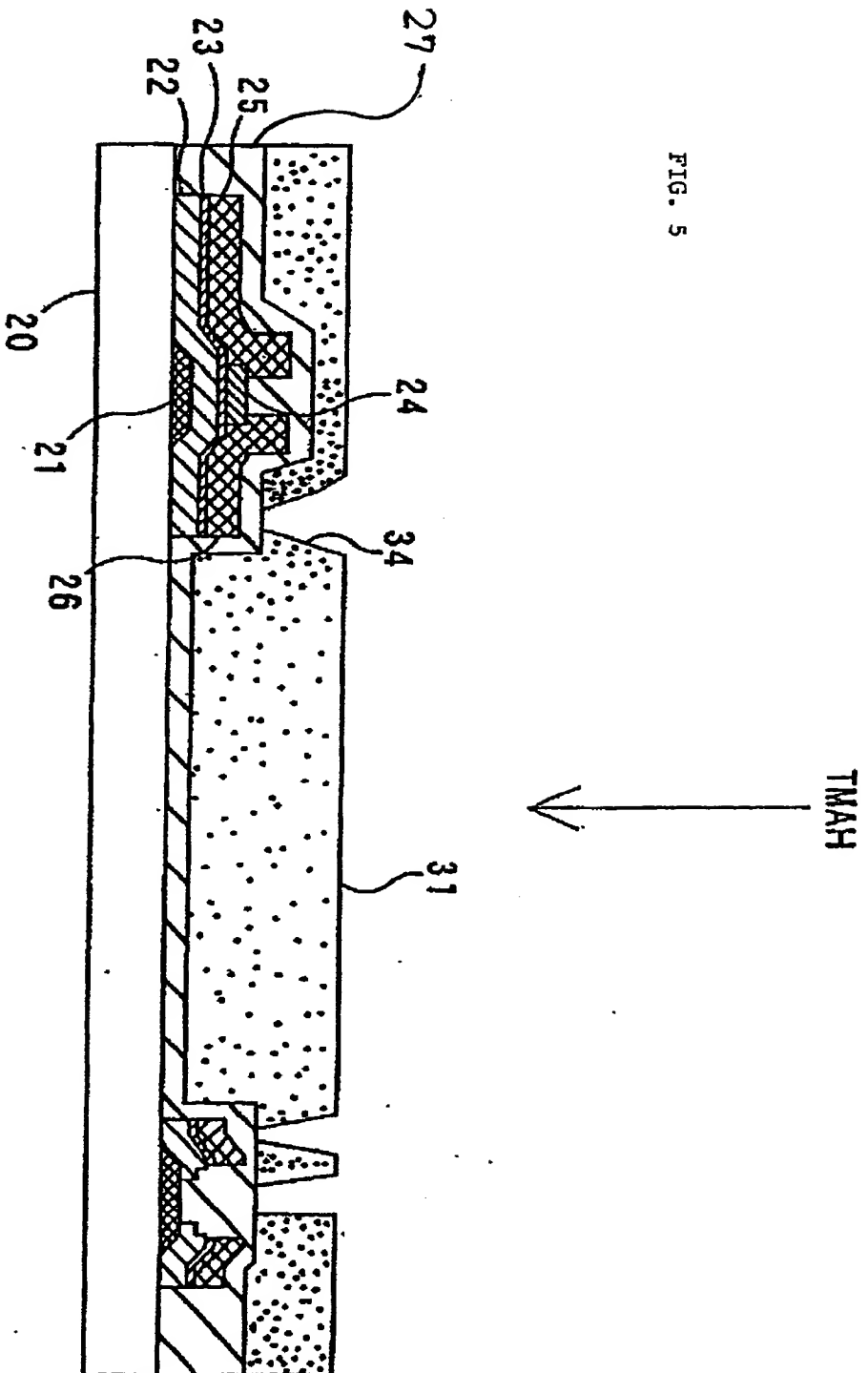
ABSTRACTED-PUB-NO: KR2002042312A

BASIC-ABSTRACT:

NOVELTY - A semiconductor device prevents etching of a shallow trench isolation (STI) layer and improves step coverage of the STI layer by using an automatic layer deposition boron nitride (ALD-BN) or plasma enhanced boron nitride (PE-BN) as an insulating layer.

DETAILED DESCRIPTION - A semiconductor device comprises a substrate (50) including an adequately aligned STI layer (56) having a groove (g) around the outer edge portion, an insulating part (64b) in the groove

FIG. 5



of the STI layer,  
sidewall spacers (64a) of a gate electrode (60) located at  
a defined portion of  
the substrate, junction areas (68) formed on both sides of  
the gate electrode  
and the sidewall spacers in the substrate, an interlayer  
dielectric (72)  
covering the resultant substrate, an etch stopper (70)  
located between the  
resultant substrate and the interlayer dielectric, and a  
metal interconnection  
(74) formed in the interlayer dielectric and connected with  
a defined portion  
of the junction areas. At this point, the insulating part  
and sidewall spacers  
comprise the same material, i.e. ALD-BN or PE-BN.

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: SEMICONDUCTOR DEVICE

DERWENT-CLASS: L03 U11

CPI-CODES: L04-C12B;

EPI-CODES: U11-A08; U11-C01; U11-C07; U11-C08A2;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2002-206634

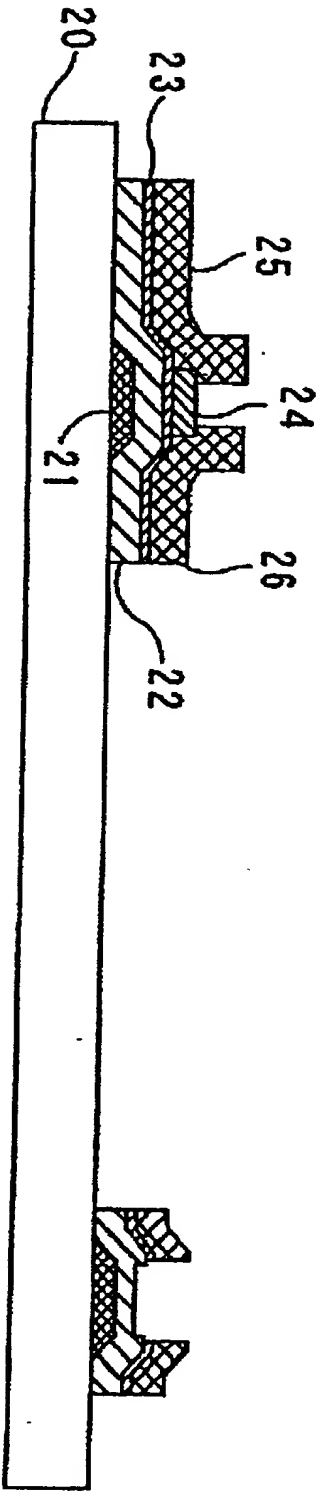


FIG. 4



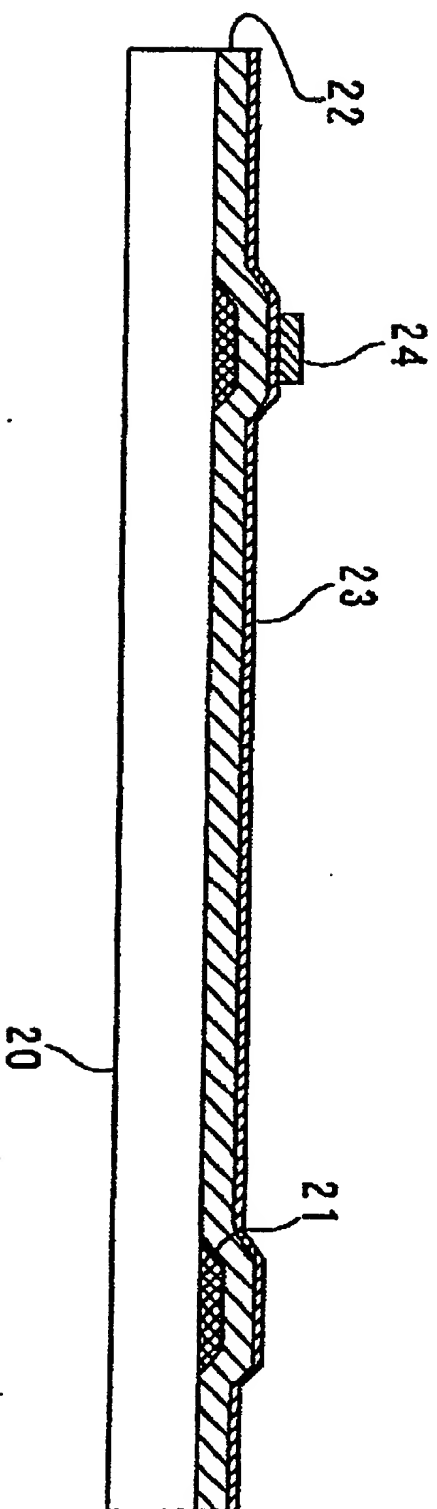


FIG. 3